B3 cont. bladder cancer, hepatoma, colorectal cancer, endometrial cancinoma, salivary gland carcinoma, kidney cancer, vulval cancer, thyroid cancer, and head and neck carcinoma.--

REMARKS

Formal Matters:

Claims 1, 3, and new claims 24-35 are pending in the application. Claims 2, 4-23 have been canceled without prejudice to later prosecution. Claims 1 and 3 are amended and new claims 24-35 are added to more particularly point out and distinctly claim the subject matter of Applicants' invention.

Support for the amendments and new claims is found throughout the specification. For example, support may be found in originally filed claims 1 and 3, and at page 2, lines 24-29; page 3, lines 21-25 and lines 34-35; page 5, line 24 to page 6, line 2; page 6, lines 8-11; page 8, line 26 to page 9, line 15; page 14, line 22 to page 15, line 17; page 18, lines 22-35; page 19, line 15 to page 22, line 3; page 38, line 10 to page 52, line 29 (Examples 1, 2, and 3); and in Figs. 1-12. No new matter is added by the amendments or new claims.

If in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is strongly encouraged to call the undersigned at the number indicated below.

This Preliminary Amendment is submitted with a transmittal letter; true copy of the specification; originally filed unsigned oath/declaration; corrected and signed oath/declaration of record in the parent application (Serial No. 09/234,730); and a Request to Use Computer-Readable Sequence Listing Under 37 CFR § 1.821(e). In the unlikely event that this document is separated from the transmittal letter, applicants petition the Commissioner to authorize charging our Deposit Account 07-0630 for any fees required or credits due and any extensions of time necessary to establish the pendency of this application.

Respectfully submitted,
GENENTECH, INC.

Date: November 28, 2000

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PENDING CLAIMS (Clean Copy)
November 28, 2000

1. A method of diagnosing tumor in a mammal, the method comprising:

(a) detecting the level of expression of a gene encoding a cardiotrophin-1 (CT-1) polypeptide in a test sample of tissue cells obtained from the mammal, wherein the cells are suspected of uncontrolled growth and wherein the detecting is by contacting, under stringent conditions, nucleic acid of the test sample cells with a nucleic acid probe comprising at least 20 contiguous nucleic acid bases from DNA 58125 (SEQ ID NO:1) or its complement (SEQ ID NO:2);

(b) detecting, as in step (a) the level of expression of a gene encoding a cardiotrophin-1 (CT-1) polypeptide in a control sample of tissue cells of the same cell type that do not exhibit uncontrolled growth; and

(c) comparing the CT-1 expression level in the test cells with the expression level in the control cells, wherein a higher expression level in the test sample indicates the presence of tumor in the mammal.

3. The method of claim 1 wherein said test sample is obtained from an individual suspected to have neoplastic cell growth or proliferation.

24. The method of claim 3 wherein the test sample is from a human.

25. The method of claim 1 wherein the CT-1 expression level in the test sample cells is at least two-fold greater than in the control cells.

26. The method of claim 1 wherein the test sample is from cancerous tissue.

27. The method of claim 26 wherein the cancerous tissue is selected from the group consisting of breast cancer, prostate cancer, colon cancer, squamous cell cancer, small-cell lung cancer, non-small-cell lung cancer, gastrointestinal cancer, pancreatic cancer, glioblastoma, cervical cancer, ovarian cancer, liver cancer, bladder cancer, hepatoma, colorectal cancer, endometrial cancinoma, salivary gland carcinoma, kidney cancer, vulval cancer, thyroid cancer, and head and neck carcinoma.

28. A method of diagnosing tumor in a mammal, the method comprising:

(a) detecting the number of copies of a gene encoding a cardiotrophin-1 (CT-1) polypeptide in a test sample of tissue cells obtained from the mammal, wherein the cells are suspected of uncontrolled growth and wherein the detecting is by contacting, under stringent conditions, nucleic acid of the test sample cells with a nucleic acid probe comprising at least 20 contiguous nucleic acid bases from DNA 58125 (SEQ ID NO:1) or its complement (SEQ ID NO:2);

(b) detecting the number of copies of a nucleic acid marker sequence on the chromosome encoding a cardiotrophin-1 (CT-1) polypeptide in the test sample, which marker gene is not amplified; and

(c) comparing the CT-1 gene copy number in the test cells with the gene copy number of the marker gene, wherein a higher CT-1 gene copy number indicates the presence of tumor in the mammal.

29. The method of claim 28 wherein the marker sequence is detected by contacting, under stringent conditions, nucleic acid of the test sample with a nucleic acid marker probe comprising at least 20 contiguous nucleic acid bases from a sequence, or its complement, in Chromosome 16 from chromosomal regions selected from the group consisting of regions P7, P55, P89, P90, P92, P93, P94, P95, P99, P154, and P208.

30. The method of claim 29 wherein the marker probe is selected from the group consisting of Stanford Human Genome Center Marker Probes SHGC-2835, SHGC-9643, SHGC-11302, EST00087, SHGC-2726, SHGC-361232, SHGC-35326, IB391, GATA7B02, SHGC-33727, and SHGC-13574.

31. The method of claim 28 wherein said test sample is obtained from an individual suspected to have neoplastic cell growth or proliferation.

32. The method of claim 31 wherein the test sample is from a human.

33. The method of claim 26 wherein the CT-1 copy number in the test sample cells is at least two-fold greater than the copy number of unamplified marker sequences.

34. The method of claim 28 wherein the test sample is from cancerous tissue.

35. The method of claim 28 wherein the cancerous tissue is selected from the group consisting of breast cancer, prostate cancer, colon cancer, squamous cell cancer, small-cell lung cancer, non-small-cell lung cancer, gastrointestinal cancer, pancreatic cancer, glioblastoma, cervical cancer, ovarian cancer, liver cancer, bladder cancer, hepatoma, colorectal cancer, endometrial cancinoma, salivary gland carcinoma, kidney cancer, vulval cancer, thyroid cancer, and head and neck carcinoma.